Geo-Environmental Security of the Toktogul Hydroelectric Power Station Region, Central Asia
(ref. 983142)

This multidisciplinary research project involves close collaboration between NATO and former Eastern Block geoscientists to analyze potential threats to the security of the Toktogul region; with recommendations for measures to mitigate a range of threat scenarios. The region lies within the actively deforming Tien Shan mountain range, the northern expression of ongoing Himalayan collisional mountain building. This deformation most notably includes the poorly-known Talas-Fergana fault, a strike-slip structure bisecting the Toktogul region that displays similar features to the San Andreas fault. The main goal of the project is to assess the geo-environmental security of the region centered on the Toktogul reservoir scheme and to formulate scenarios of potential threats to the geo-environmental security in the region.

Since the commencement of the project, archived seismic records have been compiled, analyzed and digitized along with other data within the project GIS. Samples for $^{14}$C and OSL dating collected and sent to laboratories for processing and portable strong-motion seismometers have been deployed in the field. For the coming months the slope-instability analysis is planned, including results from coring lacustrine deposits produced by landslide-dammed lakes. The list of potential end-users comprise state and local authorities, such as the Ministry of Emergency Situations in Namangan and Fergana Provinces (Uzbekistan), the Ministry of Emergencies of Kyrgyz Republic (Kyrgyzstan) and the Ministry of Agricultural and Water Resources (Uzbekistan).

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